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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PICO, ERIC E	

ART UNIT	PAPER NUMBER
3654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/163,259	ADAMS ET AL.	
	Examiner	Art Unit	
	Eric Pico	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *7 and 9-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8 and 19-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claim(s) 1-6 and 19-23** is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Aulanko et al. EP Publication No. 0710618 in view of Lewis U.S. Patent No. 1477886 and Bianca U.S. Patent No. 3101130.

3. **Regarding claim 1 and 20-23**, Aulanko et al. discloses an elevator system comprising:

4. a hoistway, referred to as shaft, defined by a surrounding structure;

5. an elevator car 1 and counterweight 2 located in the hoistway; and

6. a machine, having a drive motor 6 and a drive sheave 7, located between the elevator car 1 and a sidewall of the hoistway, the drive motor 6 drivingly coupling and suspending the elevator car 1 and counterweight 2 via the drive sheave 7 and at least one rope 3, and the drive sheave 7 is positioned from the drive motor 6 along the sidewall and an axis of rotation.

7. Aulanko et al. is silent concerning at least one flat rope, wherein the flat rope is made from a reinforceable traction material and the drive sheave has an axis of rotation

parallel to the sidewall, wherein the flat rope is reinforced with steel or fiber, and wherein the traction material is urethane or rubber.

8. Lewis teaches a flat rope, referred to as belt 2, wherein the flat rope 2 is made from a reinforceable traction material, wherein the flat rope is reinforced with fiber, referred to as threads 5, and wherein the high traction material is rubber.

9. Bianca teaches an elevator system comprising:

10. a hoistway defined by a surrounding structure;

11. an elevator car 1 and counterweight 2 located in the hoistway; and

12. a machine 5, having a drive motor and a drive sheave 5'', located between the elevator car 1 and a sidewall of the hoistway, shown in Figures 2-4, the drive motor drivingly coupling and suspending the elevator car 1 and counterweight 2 via the drive sheave 5'', which has an axis of rotation parallel to the sidewall, shown in Figures 2-4, is positioned from the drive motor along the sidewall and the axis of rotation.

13. It would have been obvious to one of ordinary skill in the art at the time of the invention to couple and suspend the elevator car and counterweight disclosed by Aulanko et al. via a flat rope as taught by Lewis to facilitate the contact between the drive sheave and the suspension means.

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the axis of rotation disclosed by Aulanko et al. parallel to the sidewall as taught by Bianca to provide simplification and reduction of the cable guidance.

15. It would have been obvious to one of ordinary in the art at the time of the invention was made to reinforce a flat rope with steel or fiber and provide a high traction

material being urethane or rubber, since it has been held to be within the general skill to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

16. **Regarding claim 2**, Aulanko et al. discloses first and second support columns 11, 11a located on opposite sides of a hoistway relative to each other, each of the support columns 11, 11a extending vertically from a bottom portion to a top portion of the hoistway between the elevator car 1 and said sidewall of the hoistway; and

17. a support member 20 mounted on and extending generally horizontally between the first and second support columns 11, 11a at a top portion of the hoistway, and wherein the drive motor 6 is supported on the support member 20.

18. **Regarding claim 3**, Aulanko et al. discloses wherein the counterweight 2 is located underneath the support member 20 between the elevator car 1 and said sidewall of the hoistway.

19. **Regarding claim 4**, Aulanko et al. discloses a counterweight sheave 9 coupled to a top portion of the counterweight 2, and at least one elevator sheave 4 coupled to an underside of the elevator car 1, the rope 3 having first and second ends 13, 14 fixedly coupled at a top portion of the hoistway, the rope 3 extending downwardly from the first end 13, looping about the counterweight sheave 9, extending upwardly and looping about the drive sheave 7, extending downwardly and underslinging the elevator car 1 via the at least one elevator sheave 4, and extending upwardly and terminating at the second end 14.

20. **Regarding claim 5**, Aulanko et al. discloses wherein the at least one elevator sheave includes first and second elevator sheaves 4 located at an underside of the elevator car 1 and at opposite sides relative to each other.

21. **Regarding claim 6**, Aulanko et al. discloses wherein the first end of the rope 3 is coupled to the support member 20 at anchorage 13.

22. **Regarding claim 19**, Aulanko et al. discloses an elevator system comprising:

23. a hoistway, referred to as shaft, having a wall;

24. an elevator car 1 traveling within the hoistway

25. a counterweight 2 traveling within the hoistway;

26. one or more ropes 3 engaged with the elevator car 1 and counterweight 2 to suspend the car 1 and counterweight 2; and

27. a drive machine 6 located between the travel path of the elevator car 1 and the wall of the hoistway, the drive machine having a drive motor 6 and a drive sheave 7 and engaged with the one or more ropes 3 through traction to drive the one or more ropes 3 and thereby the car 1 and counterweight 2, wherein the drive sheave 7 is positioned from the drive motor 6 along the sidewall and an axis of rotation.

28. Aulanko et al. is silent concerning flat ropes, wherein the flat rope is made from a reinforceable traction material and the drive sheave has an axis of rotation parallel to the sidewall.

29. Lewis teaches a flat rope; wherein the flat rope is made from a reinforceable traction material.

30. Bianca teaches an elevator system comprising:

31. a hoistway having a wall;

32. an elevator car 1 traveling within the hoistway;

33. a counterweight 2 traveling within the hoistway;

34. a drive machine 5 located between the travel path of the elevator car 1 and the wall of the hoistway, shown in Figures 2-4, the drive machine 5 having a drive motor and a drive sheave 5'' and engaged with ropes through traction to drive the ropes and thereby the car 1 and counterweight 2, and the drive sheave 5'', which has an axis of rotation parallel to the sidewall, shown in Figures 2-4, is positioned from the drive motor along the sidewall and the axis of rotation.

35. It would have been obvious to one of ordinary skill in the art at the time of the invention to engage and suspend the elevator car and counterweight disclosed by Aulanko et al. with the flat rope as taught by Lewis to facilitate the contact between the drive sheave and the suspension means.

36. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the axis of rotation disclosed by Aulanko et al. parallel to the sidewall as taught by Bianca to provide simplification and reduction of the cable guidance.

37. **Claim(s) 8** is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Aulanko et al. EP Publication No. 0710618 in view of Lewis U.S. Patent No. 1477886 as applied to claim 2 above, and further in view of Hakala et al. U.S. Patent No. 5469937.

38. **Regarding claim 8**, Aulanko et al. discloses the first and second support columns 10, 11, 11a respectively include a first guide member 10, the guide member 10 defining an elevator guide surface extending vertically therealong at least over a length

of the support columns 10, 11, 11a corresponding to the path of elevator car 1 travel, and the elevator car 1 defining opposing surfaces shaped to be movably engagable with the elevator guide surface 10 as the elevator car 1 moves vertically along the support column 10.

39. Aulanko et al. is silent concerning each of the guide members defining an elevator guide surface extending vertically therealong at least over a length of the support columns corresponding to the path of elevator car travel, and the elevator car defining opposing surfaces shaped to be movably engagable with the elevator guide surfaces as the elevator car moves vertically along the support columns.

40. Hakala et al. teaches a first and second columns, referred to as integrated rail unit 12, respectively include first and second guide members, referred to as elevator guide rails 10, the guide members 10 defining an elevator guide surface extending vertically therealong at least over a length of the columns 12 corresponding to the path of elevator car 1 travel, and the elevator car 1 defining opposing surfaces shaped to be movably engagable with the elevator guide surfaces 10 as the elevator car 1 moves vertically along the columns 12, Column 2, Lines 50-61.

41. It would have been obvious to one of ordinary skill in the art at the time of the invention to make each of the guide members disclosed by Aulanko et al. define an elevator guide surface corresponding to the path of elevator car travel as taught by Hakala et al. to accommodate space constraints within the hoistway.

Response to Arguments

42. Applicant's arguments filed 7/9/2009 have been fully considered but they are not persuasive.

43. In response to applicant's argument that there is nothing in the prior art to suggest combining Aulanko et al. EP Publication No. 0710618 in view of Lewis U.S. Patent No. 1477886. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Firstly, it should be noted that there is no requirement that an express, written suggestion to combine must appear in prior art references before a finding of obviousness. In addition to the teachings of the references themselves, the suggestion to combine references may be found in the nature of the problem to be solved or the knowledge of persons of ordinary skill in the art. Furthermore, while there must be a motivation to make the claimed invention, there is no requirement that the prior art provide the same reason as the applicant to make the claimed invention. In this case, the suggestion to combine Aulanko et al. in view of Lewis comes from the advantages described on Page 2, Lines 7-62, which include longer life, more efficient performance in service, reduction in the capacity of the belt for stretching or elongation. Applicant states, "one of ordinary skill in the art would clearly recognize the undesirability of using a fabric and rubber element to suspend an elevator and counterweight" but provides no support for this assertion.

Lewis has stated ample desirable advantages for using a fabric and rubber element to suspend an elevator and counterweight. Aulanko et al. has established a drive motor 6 drivingly coupling and suspending the elevator car 1 and counterweight 2 via the drive sheave 7 and at least one rope 3. Lewis is merely provided to show that the rope 3 of Aulanko et al. may be replaced with the flat belt as taught by Lewis to provide the advantages set forth in the reference.

44. In response to applicant's argument that "[t]he combination … would require turning the Aulanko machine ninety (90) degrees. This, however, would have the machine … extend into the vertical space occupied by the elevator car and possibly cause a conflict with the elevator car", the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

45. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Pico whose telephone number is (571)272-5589. The examiner can normally be reached on 6:30AM - 3:00PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Nguyen can be reached on 571-272-6952. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Q. Nguyen/
Supervisory Patent Examiner, Art Unit 3654

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